SEQUENCE LISTING

<110> Bass, Michael B.
Jing, Shuqian

<120> Fibroblast Growth Factor-Like Molecules and Uses Thereof

<130> 01-006-A1

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<150> 60/188,786
<151> 2000-03-13

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<170> PatentIn Ver. 2.0

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<212> DNA
<213> Homo sapiens

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<222> (610)..(1245)

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cgactgcacc tcctcgaagt tgctggctgg ctttggcaag tgcaggaatg gtgttttgtg 120

agggcatgga tggagaagtg ccaagggccc ctgtttggtc acttccgaag agcaaaaacg 180

tgttgagagg agaccggttt aagatttcaa acagaacctc cccagcgcgc atgaaaggac 240

ttgattagca tatgtcaaga ggacccgctt atatactcgg tgtgtatgta cacaggactc 300

tgatctgatc agtttgcgga attggagccc cagccaacag ccctagtcct agtattggca 360

gcggcagcta tagatatttc tgcagagcca gcagccggct cccacctacc caaggagaga 420

agatcgctcc aagacagtga gagcttccct gccatttcag tgcaaagtcc ctccggagcg 480

acctcagagg agtaaccggg ccttaacttt ttgcgctcgt tttgctataa tttttctcta 540

tccacctcca tcccaccccc acaacactct ttactggggg ggtcttttgt gttccggatc 600

tccccctcc atg gct ccc tta gcc gaa gtc ggg ggc ttt ctg ggc ggc ctg 651
Met Ala Pro Leu Ala Glu Val Gly Gly Phe Leu Gly Gly Leu
1 5 10

gag ggc ttg ggc cag cag gtg ggt tcg cat ttc ctg ttg cct cct gcc 699
Glu Gly Leu Gly Gln Gln Val Gly Ser His Phe Leu Leu Pro Pro Ala
15 20 25 30

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ggg gag cgg ccg ccg ctg ctg ggc gag cgc agg agc gcg gcg gag cgg   747
Gly Glu Arg Pro Pro Leu Leu Gly Glu Arg Arg Ser Ala Ala Glu Arg
                35                  40                  45

agc gcc cgc ggc ggg ccg ggg gct gcg cag ctg gcg cac ctg cac ggc   795
Ser Ala Arg Gly Gly Pro Gly Ala Ala Gln Leu Ala His Leu His Gly
            50                  55                  60

atc ctg cgc cgc cgg cag ctc tat tgc cgc acc ggc ttc cac ctg cag   843
Ile Leu Arg Arg Arg Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Gln
        65                  70                  75

atc ctg ccc gac ggc agc gtg cag ggc acc cgg cag gac cac agc ctc   891
Ile Leu Pro Asp Gly Ser Val Gln Gly Thr Arg Gln Asp His Ser Leu
    80                  85                  90

ttc ggt atc ttg gaa ttc atc agt gtg gca gtg gga ctg gtc agt att   939
Phe Gly Ile Leu Glu Phe Ile Ser Val Ala Val Gly Leu Val Ser Ile
95                  100                 105                 110

aga ggt gtg gac agt ggt ctc tat ctt gga atg aat gac aaa gga gaa   987
Arg Gly Val Asp Ser Gly Leu Tyr Leu Gly Met Asn Asp Lys Gly Glu
                115                 120                 125

ctc tat gga tca gag aaa ctt act tcc gaa tgc atc ttt agg gag cag  1035
Leu Tyr Gly Ser Glu Lys Leu Thr Ser Glu Cys Ile Phe Arg Glu Gln
            130                 135                 140

ttt gaa gag aac tgg tat aac acc tat tca tct aac ata tat aaa cat  1083
Phe Glu Glu Asn Trp Tyr Asn Thr Tyr Ser Ser Asn Ile Tyr Lys His
        145                 150                 155

gga gac act ggc cgc agg tat ttt gtg gca ctt aac aaa gac gga act  1131
Gly Asp Thr Gly Arg Arg Tyr Phe Val Ala Leu Asn Lys Asp Gly Thr
    160                 165                 170

cca aga gat ggc gcc agg tcc aag agg cat cag aaa ttt aca cat ttc  1179
Pro Arg Asp Gly Ala Arg Ser Lys Arg His Gln Lys Phe Thr His Phe
175                 180                 185                 190

tta cct aga cca gtg gat cca gaa aga gtt cca gaa ttg tac aag gac  1227
Leu Pro Arg Pro Val Asp Pro Glu Arg Val Pro Glu Leu Tyr Lys Asp
                195                 200                 205

cta ctg atg tac act tga agtgcgatag tgacattatg gaagagtcaa        1275
Leu Leu Met Tyr Thr
            210

accacaacca ttctttcttg tcatagttcc catcataaaa taatgaccca agcag    1330
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<211> 211
<212> PRT
<213> Homo sapiens

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Leu Gly Gln Gln Val Gly Ser His Phe Leu Leu Pro Pro Ala Gly Glu
20 25 30

Arg Pro Pro Leu Leu Gly Glu Arg Arg Ser Ala Ala Glu Arg Ser Ala
35 40 45

Arg Gly Gly Pro Gly Ala Ala Gln Leu Ala His Leu His Gly Ile Leu
50 55 60

Arg Arg Arg Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Gln Ile Leu
65 70 75 80

Pro Asp Gly Ser Val Gln Gly Thr Arg Gln Asp His Ser Leu Phe Gly
85 90 95

Ile Leu Glu Phe Ile Ser Val Ala Val Gly Leu Val Ser Ile Arg Gly
100 105 110

Val Asp Ser Gly Leu Tyr Leu Gly Met Asn Asp Lys Gly Glu Leu Tyr
115 120 125

Gly Ser Glu Lys Leu Thr Ser Glu Cys Ile Phe Arg Glu Gln Phe Glu
130 135 140

Glu Asn Trp Tyr Asn Thr Tyr Ser Ser Asn Ile Tyr Lys His Gly Asp
145 150 155 160

Thr Gly Arg Arg Tyr Phe Val Ala Leu Asn Lys Asp Gly Thr Pro Arg
165 170 175

Asp Gly Ala Arg Ser Lys Arg His Gln Lys Phe Thr His Phe Leu Pro
180 185 190

Arg Pro Val Asp Pro Glu Arg Val Pro Glu Leu Tyr Lys Asp Leu Leu
195 200 205

Met Tyr Thr
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<210> 3
<211> 208
<212> PRT
<213> Homo sapiens

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Val Pro Phe Gly Asn Val Pro Val Leu Pro Val Asp Ser Pro Val Leu
20 25 30

Leu Ser Asp His Leu Gly Gln Ser Glu Ala Gly Gly Leu Pro Arg Gly

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          35                  40                  45

Pro Ala Val Thr Asp Leu Asp His Leu Lys Gly Ile Leu Arg Arg Arg
     50                  55                  60

Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly
 65                  70                  75                  80

Thr Ile Gln Gly Thr Arg Lys Asp His Ser Arg Phe Gly Ile Leu Glu
                 85                  90                  95

Phe Ile Ser Ile Ala Val Gly Leu Val Ser Ile Arg Gly Val Asp Ser
            100                 105                 110

Gly Leu Tyr Leu Gly Met Asn Glu Lys Gly Glu Leu Tyr Gly Ser Glu
        115                 120                 125

Lys Leu Thr Gln Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp
    130                 135                 140

Tyr Asn Thr Tyr Ser Ser Asn Leu Tyr Lys His Val Asp Thr Gly Arg
145                 150                 155                 160

Arg Tyr Tyr Val Ala Leu Asn Lys Asp Gly Thr Pro Arg Glu Gly Thr
                165                 170                 175

Arg Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val
            180                 185                 190

Asp Pro Asp Lys Val Pro Glu Leu Tyr Lys Asp Ile Leu Ser Gln Ser
        195                 200                 205
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<210> 4
<211> 208
<212> PRT
<213> Rattus norvegicus

<400> 4

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Met Ala Pro Leu Gly Glu Val Gly Ser Tyr Phe Gly Val Gln Asp Ala
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Val Pro Phe Gly Asn Val Pro Val Leu Pro Val Asp Ser Pro Val Leu
             20                  25                  30

Leu Ser Asp His Leu Gly Gln Ser Glu Ala Gly Gly Leu Pro Arg Gly
         35                  40                  45

Pro Ala Val Thr Asp Leu Asp His Leu Lys Gly Ile Leu Arg Arg Arg
     50                  55                  60

Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly
 65                  70                  75                  80
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Thr Ile Gln Gly Thr Arg Lys Asp His Ser Arg Phe Gly Ile Leu Glu
                85                  90                  95

Phe Ile Ser Ile Ala Val Gly Leu Val Ser Ile Arg Gly Val Asp Ser
            100                 105                 110

Gly Leu Tyr Leu Gly Met Asn Glu Lys Gly Glu Leu Tyr Gly Ser Glu
        115                 120                 125

Lys Leu Thr Gln Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp
    130                 135                 140

Tyr Asn Thr Tyr Ser Ser Asn Leu Tyr Lys His Val Asp Thr Gly Arg
145                 150                 155                 160

Arg Tyr Tyr Val Ala Leu Asn Lys Asp Gly Thr Pro Arg Glu Gly Thr
                165                 170                 175

Arg Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val
            180                 185                 190

Asp Pro Asp Lys Val Pro Glu Leu Tyr Lys Asp Ile Leu Ser Gln Ser
        195                 200                 205
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<210> 5
<211> 207
<212> PRT
<213> Homo sapiens

<400> 5

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Met Ala Glu Val Gly Gly Val Phe Ala Ser Leu Asp Trp Asp Leu His
  1               5                  10                  15

Gly Phe Ser Ser Ser Leu Gly Asn Val Pro Leu Ala Asp Ser Pro Gly
             20                  25                  30

Phe Leu Asn Glu Arg Leu Gly Gln Ile Glu Gly Lys Leu Gln Arg Gly
         35                  40                  45

Ser Pro Thr Asp Phe Ala His Leu Lys Gly Ile Leu Arg Arg Arg Gln
     50                  55                  60

Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly Thr
 65                  70                  75                  80

Val His Gly Thr Arg His Asp His Ser Arg Phe Gly Ile Leu Glu Phe
                85                  90                  95

Ile Ser Leu Ala Val Gly Leu Ile Ser Ile Arg Gly Val Asp Ser Gly
            100                 105                 110

Leu Tyr Leu Gly Met Asn Glu Arg Gly Glu Leu Tyr Gly Ser Lys Lys
        115                 120                 125
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Leu Thr Arg Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp Tyr
    130                 135                 140

Asn Thr Tyr Ala Ser Thr Leu Tyr Lys His Ser Asp Ser Glu Arg Gln
145                 150                 155                 160

Tyr Tyr Val Ala Leu Asn Lys Asp Gly Ser Pro Arg Glu Gly Tyr Arg
                165                 170                 175

Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val Asp
            180                 185                 190

Pro Ser Lys Leu Pro Ser Met Ser Arg Asp Leu Phe His Tyr Arg
        195                 200                 205


<210> 6
<211> 208
<212> PRT
<213> Mus musculus

<400> 6
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            20                  25                  30

Leu Asn Asp His Leu Gly Gln Ser Glu Ala Gly Gly Leu Pro Arg Gly
        35                  40                  45

Pro Ala Val Thr Asp Leu Asp His Leu Lys Gly Ile Leu Arg Arg Arg
    50                  55                  60

Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly
65                  70                  75                  80

Thr Ile Gln Gly Thr Arg Lys Asp His Ser Arg Phe Gly Ile Leu Glu
                85                  90                  95

Phe Ile Ser Ile Ala Val Gly Leu Val Ser Ile Arg Gly Val Asp Ser
            100                 105                 110

Gly Leu Tyr Leu Gly Met Asn Glu Lys Gly Glu Leu Tyr Gly Ser Glu
        115                 120                 125

Lys Leu Thr Gln Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp
    130                 135                 140

Tyr Asn Thr Tyr Ser Ser Asn Leu Tyr Lys His Val Asp Thr Gly Arg
145                 150                 155                 160

Arg Tyr Tyr Val Ala Leu Asn Lys Asp Gly Thr Pro Arg Glu Gly Thr
                165                 170                 175

Arg Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val
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            180                 185                 190

Asp Pro Asp Lys Val Pro Glu Leu Tyr Lys Asp Ile Leu Ser Gln Ser
        195                 200                 205
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<210> 7
<211> 207
<212> PRT
<213> Mus musculus

<400> 7

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Met Ala Glu Val Gly Gly Val Phe Ala Ser Leu Asp Trp Asp Leu Gln
  1               5                  10                  15

Gly Phe Ser Ser Ser Leu Gly Asn Val Pro Leu Ala Asp Ser Pro Gly
             20                  25                  30

Phe Leu Asn Glu Arg Leu Gly Gln Ile Glu Gly Lys Leu Gln Arg Gly
         35                  40                  45

Ser Pro Thr Asp Phe Ala His Leu Lys Gly Ile Leu Arg Arg Arg Gln
     50                  55                  60

Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly Thr
 65                  70                  75                  80

Val His Gly Thr Arg His Asp His Ser Arg Phe Gly Ile Leu Glu Phe
                 85                  90                  95

Ile Ser Leu Ala Val Gly Leu Ile Ser Ile Arg Gly Val Asp Ser Gly
            100                 105                 110

Leu Tyr Leu Gly Met Asn Glu Arg Gly Glu Leu Phe Gly Ser Lys Lys
        115                 120                 125

Leu Thr Arg Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp Tyr
    130                 135                 140

Asn Thr Tyr Ala Ser Thr Leu Tyr Lys His Ser Asp Ser Glu Arg Gln
145                 150                 155                 160

Tyr Tyr Val Ala Leu Asn Lys Asp Gly Ser Pro Arg Glu Gly Tyr Arg
                165                 170                 175

Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val Asp
            180                 185                 190

Pro Ser Lys Leu Pro Ser Met Ser Arg Asp Leu Phe Arg Tyr Arg
        195                 200                 205
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<210> 8
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<212> PRT
<213> Human immunodeficiency virus type 1

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Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg
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<210> 9
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: internalizing domain derived from HIV tat protein

<400> 9
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1 5 10 15

<210> 10
<211> 23
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: oligonucleotide; PCR primer 2440-39

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<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: oligonucleotide; PCR primer 2432-77

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